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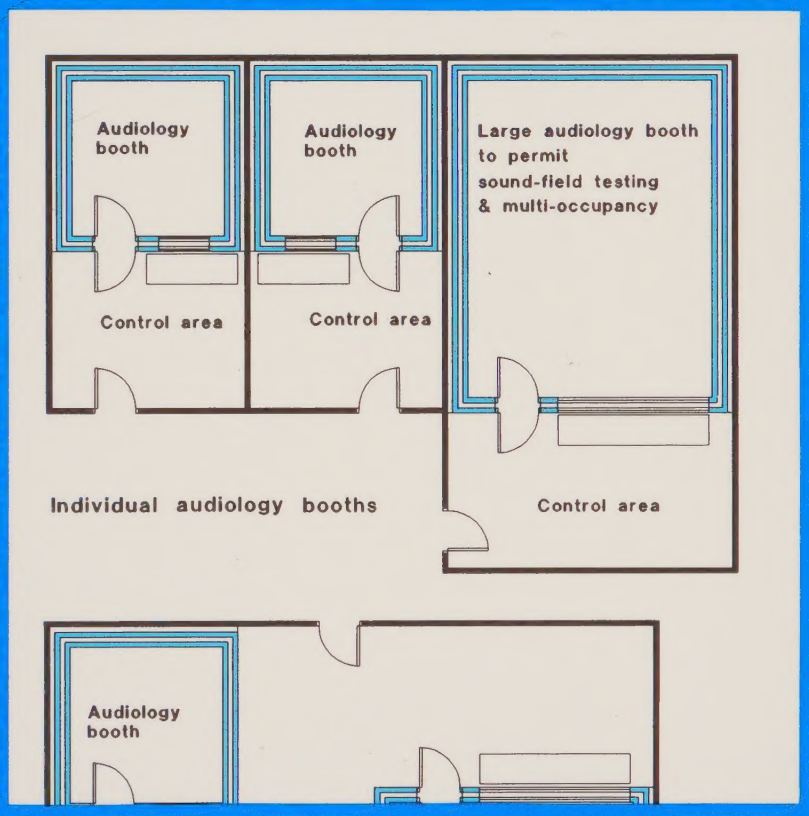
Health Building Note 12

Supplement 3

ENT and audiology clinics
Hearing aid centre



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ENT and audiology clinics
Hearing aid centre

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About this publication

The Health Building Note series is intended to give advice on the briefing and design implications of Department of Health policy.

These Notes are prepared in consultation with representatives of the National Health Service and appropriate professional bodies. Health Building Notes are aimed at multi-disciplinary teams engaged in:

- designing new buildings;
- adapting or extending existing buildings.

Throughout the series, particular attention is paid to the relationship between the design of a given department and its subsequent management. Since this equation will have important implications for capital and running costs, alternative solutions are sometimes proposed. The intention is to give the reader informed guidance on which to base design decisions.

Health Building Note 12
Supplement 3

This supplement focuses on Acute General Hospital accommodation for:

- consulting, examination and treatment associated with the specialties of ENT and audiological medicines;
- hearing aid centre;
- speech therapy associated with ENT conditions.

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1.0 Scope of Supplement 3 to Health Building Note 12

Introduction

1.1 Health Building Note (HBN) 12, Supplement 3 is a guide to the planning and design of ear, nose and throat (ENT) and audiology clinics, and hearing aid centres. These will usually be located in general out-patients departments (OPD) of Acute General Hospitals, but could be located elsewhere.

1.2 It is a supplement to HBN 12, 'Out-patients department',[1] 1990, which provides planning and design guidance for general out-patients accommodation. Supplement 3 should be read in conjunction with HBN 12.

1.3 This Supplement replaces Design Guide 6 – 'Hospital ENT services', 1974 and responds to changes in ENT and audiological medicines since that time, including:

- the development of audiological medicine;
- technological advances in equipment design;
- the introduction of flexible endoscopes;
- the attendance of patients who are better informed and have higher expectations with regard to the quality of service and environment.

1.4 This Supplement also takes into account the recommendations relevant to health buildings of the British Association of Otolaryngologists report on 'Minimum requirements for otolaryngology departments in NHS hospitals'.[2]

1.5 ENT and audiological medicines cover all treatment for ear, nose and throat conditions. ENT medicine is predominantly a surgical speciality with some patients managed medically, while audiological medicine covers some aspects of medical treatment, and the investigation of hearing and balance. Historically, all aspects of specialist care for people with ear, nose and throat conditions have come within ENT services, with audiology departments providing support in diagnosis and rehabilitation.

1.6 The emergence of audiological medicine as a speciality in its own right is beginning to change this pattern. In addition to the investigative role, audiology consultants provide some of the medical management formerly provided by ENT consultants and the two specialities should be seen as complementary.

1.7 Speech therapy is also associated with the ENT clinic, providing specialised examination, visualisation and analysis of vocal function and speech rehabilitation.

Inclusions

1.8 Accommodation described in this Supplement is suitable for:

a. adult and child patients;

b. consultation and examination of people suffering from ear, nose and throat disorders who have been referred as out-patients by general medical practitioners or hospital consultants;

c. undertaking procedures, treatment and care;

d. the investigation and treatment of balance disorders and deafness;

e. hearing aid services;

f. therapeutic speech audiometry.

1.9 This Supplement contains guidance on the planning and design of separate ENT and audiology clinics. However, it is expected that project teams will use the components of the information to plan a combined ENT and audiology clinic, in which case the Departmental Cost Allowances should be amended accordingly.

1.10 ENT and audiology clinics are specialist clinics and the accommodation described in this Supplement is unsuitable for other out-patient functions. Project teams should consider this very carefully when preparing business cases, particularly in relation to determining size.

1.11 An ENT clinic may be considered the most convenient location for the main office accommodation for ENT consultants, junior staff and secretarial staff.

Exclusions

1.12 This Supplement does not include guidance on the facilities required for in-patients or for specialised tertiary referral centres.

Cost allowances

1.13 The NHS is notified of the Departmental Cost Allowances for this Supplement in an Annex to an Estates Executive Letter issued separately.

References

1.14 Documents referred to by number, for example[2], are listed at the end of the Supplement. Each repeated reference retains the same number.

1.15 While this Supplement contains guidance that is current at the time of publication, project teams should ensure that they investigate the possibility of changes since the publication date.

2.0 General service considerations

Introduction

2.1 The main functions of ENT and audiology clinics are:

a. specialist consultation, examination and treatment in respect of diseases and disorders of the ear, nose and throat that do not require either daycase or in-patient activity;

b. assessment and treatment of balance disorders and deafness;

c. following up and monitoring the condition of patients who have received daycase or in-patient treatment;

d. discharging patients from the care of the hospital, with referral, if necessary, to other health services.

Factors affecting the size of a service

2.2 One of the principal factors affecting the size of an ENT service is the number of consultants employed in a particular locality. There is a trend away from the employment of a single consultant in a speciality. This, combined with the volume of clinical activity required to maintain a level of expertise, and with the recommendation by the British Association of Otolaryngologists in 1993[3] for a rate of one consultant per 80,000 population, would indicate a minimum viable ENT department size of three consultants providing a service to a population of a quarter of a million.

2.3 This leads to the likelihood that a full ENT service with in-patient beds may be based in one acute hospital with out-patient consultation and treatment activities offered in other hospitals on a peripatetic basis.

2.4 It is expected that an audiology service, almost exclusively an out-patient service, will be centralised, for a population of 250,000, because of the cost and difficulty in installing audiometry booths. However, it is anticipated that increasingly, audiology staff will carry out preliminary assessments in the community.

2.5 In order to plan and design efficient and economical accommodation, project teams are advised to take account of the local contract conditions applying to the service for which the accommodation is being provided.

Patients

2.6 Out-patients attending ENT or audiology clinics:

a. are mainly ambulant;

b. may be of any age, with a predominance of the very young and the elderly;

c. are frequently accompanied by an escort;

d. may be physically handicapped;

e. may have a hearing or speech disability.

2.7 The environment should be responsive to the needs of children, physically handicapped and sensorily disabled people.

Children's needs

2.8 'Welfare of Children and Young People in Hospital',[4] 1991 highlights the importance of designing out-patient services for children in provider hospitals to ensure that scale, ambience and character are honed to the younger customer. If a separate children's OPD is not provided, it is suggested that a discrete area, with appropriate staffing and equipment, be designated for children within the adult department, or that specific times be designated for the exclusive attendance of children.

2.9 Where a project team elects not to separate children from adult patients, the environment of both the ENT and audiology clinics should take into account the large number of children attending. In addition, pre-school age children may also be present when a parent is the out-patient.

2.10 Special care should be taken to ensure that children are not distressed by the sight and/or sound of patients undergoing treatment. Provision of appropriate waiting facilities is important, including a designated area where children can play.

Children's ENT

2.11 A characteristic of this speciality is that treatment for children differs significantly from that for adults.

2.12 ENT medicine for children under 15 years of age is largely concerned with conditions arising from upper respiratory tract infections.

Children's audiology

2.13 While defects of hearing affect all age groups, screening services for babies and young children (age up to five years) are of great importance so that disorders can be identified early enough to avoid impairment of speech, and educational difficulties. When a hearing loss is identified by initial screening in the Community, more sophisticated testing, diagnosis, treatment and monitoring is undertaken in a specialised children's hearing assessment centre, as an element of a comprehensive audiology service.

Adult ENT and audiology

2.14 Common conditions found in adults vary from relatively minor complaints such as sinusitis and nasal polyps to neurological disorders, different types of carcinoma and disorders of the inner and middle ear. It may be more appropriate for the assessment of the hearing of people with learning difficulties to be undertaken in children's hearing assessment centres.

Accidents and emergencies

2.15 Patients with emergency ear, nose and throat problems will be seen initially in the accident and emergency department. However, it may be considered more appropriate to transfer some patients to the ENT clinic, where specialist staff and equipment are available. This is particularly so in the case of a young child with a foreign body in an ear or nose.

Appointments system, reception and waiting

2.16 Apart from casualties, all consultations, examinations, tests and treatment in these clinics should be by appointment. The Government White Paper 'Working for Patients',[5] 1989 identifies the desirability of:

a. appointments systems which give people individual appointment times that they can rely upon. Waits of two to three hours in out-patient clinics are unacceptable;

b. providing quiet and pleasant waiting and other public areas, with proper facilities for patients with children, and for counselling worried parents and relatives.

2.17 Where possible, sub-waiting areas in corridors should be avoided by careful consideration of the planning arrangement.

2.18 A patient's records will be stored in the health records department and will only be brought into the clinics for a patient's appointment, after which they will be returned. Hearing aid centres operate on a "drop-in" basis, without formal appointments, and it is therefore necessary for hearing aid case records to be held within the hearing aid centre.

Clinical management of patients

2.19 Clinical management of patients includes:

- examination, treatment, and monitoring which may involve computerised and manual techniques;
- taking ear moulds or impressions, and fitting and evaluating the effectiveness of hearing aid appliances;
- consultation and therapeutic treatment for speech disorders.

Staff

2.20 All clinicians, audiology staff and nursing staff working in these clinics will be trained in the appropriate specialty. The different specialties may function separately or in conjunction.

3.0 General functional and design requirements

Introduction

3.1 Chapter 3 of HBN 12 – 'Out-patients department' [1], as modified by this chapter, provides general functional and design guidance on a range of topics which should be taken into account when designing ENT and audiology clinics, and hearing aid centres.

Planning and design

3.2 Accommodation for ENT and audiology clinics should be planned and designed to the same standard as that described in HBN 12[1] for general out-patient purposes.

3.3 Patients attending ENT and audiology clinics, particularly for the first time, may be apprehensive and every effort should be made to reassure them. The general atmosphere in the clinics should be open, pleasant and friendly; this will help both patients and staff feel at ease. Furnishings and lighting should contribute to creating a relaxed and comfortable environment.

Location and relationships

3.4 There are four possibilities for the location of an ENT clinic:

a. within the overall curtilage of the general out-patients department (OPD) of an Acute General Hospital. Figure 1 illustrates key locational relationships;

b. as a stand-alone clinic within an Acute General Hospital;

c. close to the ENT in-patient provision, maximising the use of skilled ENT staff;

d. close to the children's department.

3.5 An audiology clinic will normally be combined with, or in close proximity to, an ENT clinic (see Figure 1).

3.6 A hearing aid centre may be located in an Acute General Hospital, where it will normally be co-located with an audiology clinic, or alternatively it may be provided in the Community, attached to a health centre or as a stand-alone unit in a "high street" location.

3.7 Where ENT and audiology clinics are located within the OPD, they will ideally be at ground floor level and close to the main entrance of the hospital. Separate entrances are not necessary, but patients should not have to pass through clinical areas to reach the ENT and audiology clinics. As far as practicable, the aim should be to site the clinics towards a quiet corner of the hospital away from noisy locations, such as rehabilitation accommodation, car parks and roads, busy circulation areas, service areas and plant rooms.

3.8 This Supplement assumes that the health records department is responsible for the safe-custody of patients' records and for providing a service to the ENT and audiology clinics in a similar way to other clinics in the general OPD. It is necessary, therefore, that the health records department be easily accessible to the ENT and audiology clinics. Hearing aid centres are likely to hold their patients' case notes.

3.9 ENT patients may attend the radiology department during a clinic session. The radiology department should therefore be reasonably accessible.

3.10 Patients in the accident and emergency department may need to be transferred to the ENT clinic for an emergency procedure.

Clinic opening hours

3.11 Consideration should be given to providing evening or weekend sessions which may be more convenient for some patients and, at the same time, improve the utilisation of capital resources. If normal clinic hours are extended, attention will also need to be given to the availability of support services and facilities, and to the need for cleaning and maintenance.

Accommodation in ENT and audiology clinics and a hearing aid centre

3.12 Specific spaces in ENT and audiology clinics and a hearing aid centre which are not described in HBN 12[1] are as follows:

ENT clinic
Consulting/examination room
Treatment room
Preparation room
Cleansing/disinfecting room
Recovery room
Staff base
Speech therapy consulting/
examination/treatment room

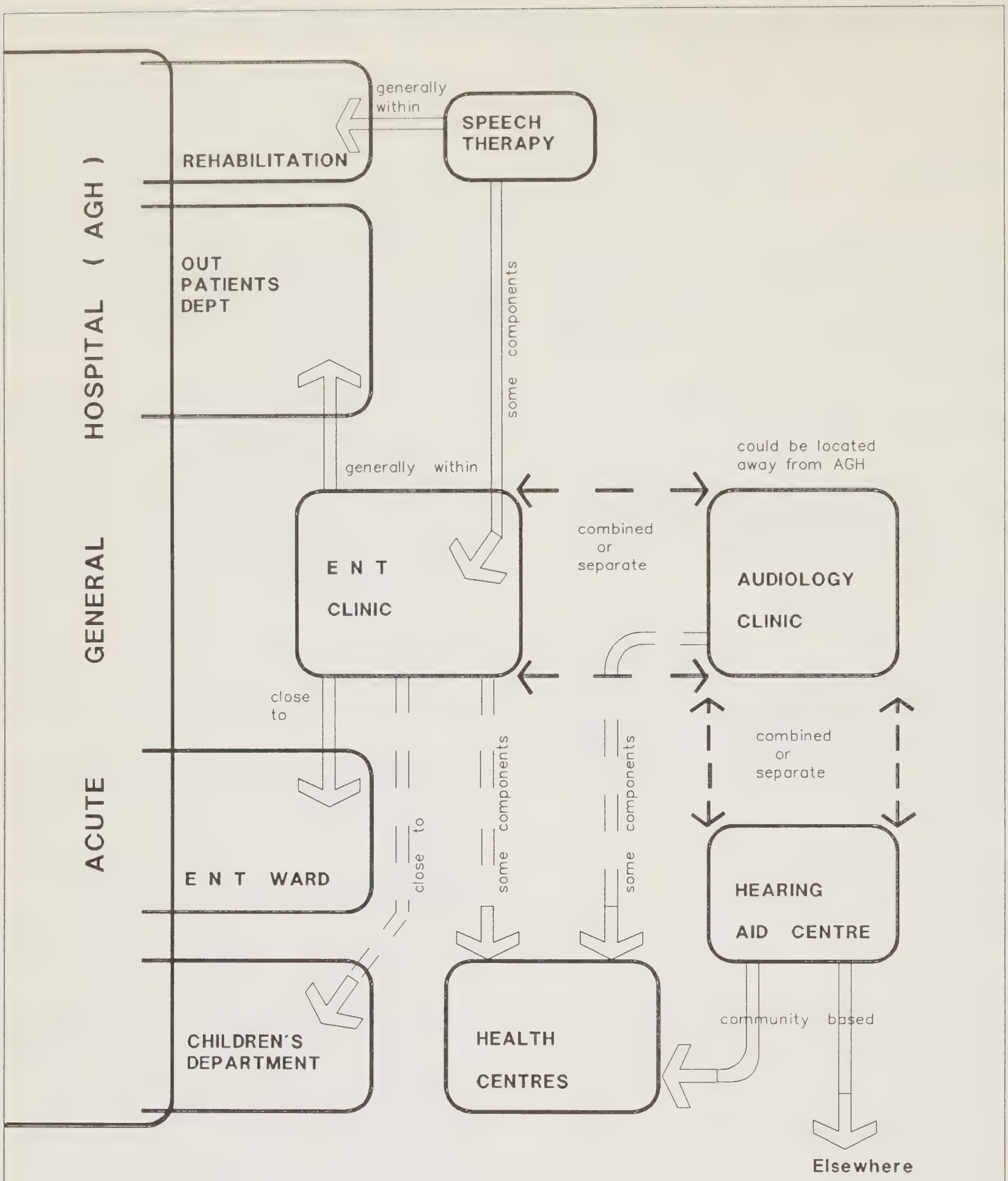


Figure 1 Locational relationships between ENT and audiology clinics, hearing aid centre and speech therapy accommodation

Audiology clinic
Audiometric testing area
Vestibular function test room
Audiology equipment store

Hearing aid centre
Interview and fitting room
Environmental devices demonstration room
Hearing aid workshop
Ear mould workshop

3.13 Figure 2 illustrates basic accommodation and functional grouping.

Speech therapy

3.14 While this Supplement assumes that the major provision for speech therapy will be located in Rehabilitation, it recognises there may also be a requirement for a satellite provision associated with the ENT clinic.

3.15 Accommodation required for speech therapy is described in HBN 8 – 'Rehabilitation – accommodation for physiotherapy, occupational therapy and speech therapy'.[6]

Other spaces in ENT and audiology clinics and a hearing aid centre

3.16 Other spaces in ENT and audiology clinics and a hearing aid centre (not identified as specific spaces in paragraph 3.12) are described in HBN 12,[1] modified and amplified, where necessary, in Chapter 4 of this Supplement.

Hard of hearing patients

3.17 Project teams should consider measures which may be taken to assist hard of hearing patients when attending the accommodation described in this Supplement. Such measures may include adapting conventional telephones by providing, for example, volume controls and portable amplifiers, installing induction loops where appropriate, providing a visual patient call system in the reception/main waiting area, and reducing background noise by fitting carpets wherever possible.

Floor finishes

3.18 The accommodation described in this Supplement can largely be carpeted. This is particularly important in the audiology clinic, where carpets will reduce sound transmission. Spaces where carpeting is inappropriate include the vestibular function test room, hearing aid repair workshop, ear mould workshop, ENT treatment facility (excluding the recovery room) and toilet areas. Sheet vinyl or a similar material is appropriate in these areas.

Noise and sound attenuation

3.19 ENT and audiology clinics include a number of rooms in which low noise levels are required. Other areas, including the interview/fitting room, speech therapy consulting/examination/treatment room, and the control areas of the audiometric testing area should also be sound insulated, but to a less exacting standard.

3.20 The audiology booth is a specialist acoustic environment and is referred to in detail in Chapter 4. The other rooms regarded as being sensitive to sound can be protected by a number of measures, which may include:

- constructing the enclosing partitions up to the underside of the structural slab with dense bricks or blocks, and ensuring there are no voids in the joints;
- plastering both sides of the partition with dense fibrous plaster;
- providing a solid door, accoustically sealed to its jambs, head and threshold;
- packing the door frame tightly to the masonry aperture;
- ensuring any window is double glazed with a cavity/air gap of 100 mm minimum, and is acoustically sealed;
- providing a suspended ceiling;
- finishing the room with a carpet and acoustic underlay, and decorating the walls with fabric wallpapers.

SHARED ACCOMMODATION

Staff
- Reception
- Interview room
- Staff WC/wash
- Beverage bay

Patients
- Waiting area
- Children's play space
- WC/wash/nappy change
- Disabled WC/wash
- Wheelchair hold

Utility/ support spaces
- Cleaners' room
- Switch cupboard

ENT CLINIC

- Consulting/examination rooms
- Treatment rooms
- Preparation room
- Cleansing/disinfecting room
- Recovery room
- Staff base
- Sub–waiting area
- Clean utility
- Dirty utility
- Nursing/administration office
- Clinic store
- Consultant's office
- Junior staff office
- Secretarial office

AUDIOLOGY CLINIC

- Audiometric testing area
- Vestibular function test room
- Audiology equipment store
- Principal audiologist's office
- Staff office/rest room

HEARING AID CENTRE

- Interview & fitting room
- Environmental devices demonstration room
- Hearing aid repair workshop
- Ear mould workshop

Figure 2 ENT clinic + audiology clinic + hearing aid centre

Basic accommodation – list of spaces and functional grouping
(For functional units and number of rooms required see schedules of accommodation in Chapter 7.)

4.0 Specific functional and design requirements

Introduction

4.1 This chapter should be read in conjunction with HBN 12 – 'Out-patients department',[1] for the description of general out-patients department (OPD) accommodation. The specific functional and design requirements for spaces in the ENT and audiology clinics, hearing aid centre and satellite speech therapy accommodation are described below.

4.2 Lists of activities and equipment, and details of environmental conditions and finishes of walls, floors and ceilings are presented in the activity data sheets (see Chapter 8 of this Supplement).

Spaces common to ENT and audiology clinics and a hearing aid centre

Reception

4.3 A reception desk, dedicated to support the ENT clinic and/or audiology clinic is required where:

- patients can be received and registered;
- re-appointments, and appointments with other clinics, can be made;
- health records can be held temporarily;
- telephone(s) and visual display terminal(s) (VDT) will be used.

Some of these activities may need to be carried out discreetly.

4.4 The reception desk should be located adjacent to the waiting area and reasonably close to the clinical rooms. The receptionist should be able to observe the main waiting area and any sub-waiting spaces supporting the clinical rooms.

4.5 As most deaf and hard of hearing people rely to some extent on lip reading, it is important to ensure that the receptionist's face is in clear view. A well lit quiet environment facilitates communication. A glass screen barrier between the receptionist and the deaf or hard of hearing must be avoided.

4.6 To assist some elderly, deaf and hard of hearing patients to know when they are being called to a clinical room, the receptionist may use a supplementary visual system. The fewer the number of patients waiting at any one time, the easier it is for a personal approach to be made in identifying and escorting a patient to a clinical room.

Waiting area

4.7 Ideally, the main waiting area should respond to the differing needs of adults and children. It may be possible for a large waiting area to be designed with smaller seating areas in which certain patients can be grouped – for example, children or those with a hearing or speech impediment. This may be achieved in a single space by arrangement of seating, different chair colours, indoor planting and the use of screening.

4.8 However arranged, the waiting area should provide a pleasant environment where patients can sit and relax prior to an appointment. It should be adjacent to, and be overseen by, the receptionist and have easy access to all clinical rooms. There should be a variety of seating and adequate space for wheelchair and pushchair users.

4.9 The size of the waiting area is affected by:

a. the flow of patients through the clinic;

b. the number of companions;

c. the number of wheelchair and pushchair users.

4.10 A variety of up-to-date reading material should be available. It is important to remember that for those wearing a hearing aid, any background noise is amplified and therefore sound from low-level background music or a video system may not be appropriate here.

4.11 A carpet softens extraneous background noise, and assists communication with hard of hearing patients and those using a hearing aid.

Children's play space

4.12 A play space should be provided for children who are patients or who are accompanying adult patients. Young children should be able to play or read in safety without disturbing adult patients.

4.13 The play space should be located so that children can be easily supervised by adults in the waiting area. A cupboard or toy box should be provided for the storage of toys, books etc.

Patients' toilets

4.14 WCs with hand washing and nappy changing facilities should be readily accessible from the waiting area. At least one toilet designed for wheelchair users should be provided.

Wheelchair hold

4.15 If not conveniently available elsewhere, a space for parking a single wheelchair is required.

Cleaners' room

4.16 It is assumed that domestic services staff who provide a cleaning service to the ENT and audiology clinics and hearing aid centre will use the cleaners' room in the general OPD as a base, wherever possible. However, if any of the clinics are provided on a stand-alone basis, a cleaners' room will be required.

ENT clinic

4.17 A notional plan of an ENT clinic comprising six consulting/examination rooms is included at Appendix 1.

Consulting/examination room

4.18 HBN 12[1] describes a combined consulting and examination room (see paragraphs 4.19 to 4.23 in that Note). However, the specialist requirements associated with consulting and examining ENT out-patients requires amendments to be made and these include:

- the examination of an ENT out-patient does not, usually, require a couch with a curtained area. An appropriate chair for the patient should therefore suffice. On the infrequent occasions that a patient needs to lie horizontally, use may be made of an ENT treatment room, where a multi-purpose chair/couch is provided;
- other requirements may include an examination light, cautery, suction, mirror heater, and the presentation of instruments;
- project teams may wish to consider installing commercially available, purpose-designed, built-in fixtures, fittings and equipment;
- while the presence of daylight within a consulting/examination room is commended, it should be noted that at times the room will require dimming and blackout arrangements.

Treatment facility

4.19 The treatment facility comprises the following spaces:

a. treatment rooms;
b. preparation room;
c. cleansing/disinfecting room;
d. recovery room;
e. staff base.

4.20 These spaces will be used during clinic sessions as required. The level of provision will depend upon the size of the ENT clinic and the local practice for conducting clinical investigations and treatments. Operative procedures, under general anaesthesia, are not expected to be undertaken in the treatment facility.

Treatment room

4.21 Investigations and treatments not appropriate to a consulting/examination room may be carried out in a treatment room, with the patient either supine or sitting. A multi-purpose chair/couch may be considered useful.

4.22 Most activities are conducted in the vicinity of the patient's head, where the clinician stands or is seated. The clinician will require a trolley for presenting instruments and equipment.

4.23 Certain clinical procedures will require the use of an endoscope, flexible or rigid, with accessories. A light source for the endoscope, and suction and cautery are required. An operating microscope, wall-mounted or mobile on a stand, should be provided. A mobile microscope may be used, if required, in a consulting/examination room, but the problems presented by the transportation and storage of this bulky, yet delicate, instrument must be considered. A wall-mounted microscope requires a rigid supporting structure, otherwise vibration may occur. It should not be assumed that an existing structure is suitable.

4.24 Provision for hanging a patient's outdoor clothing is required.

Preparation room

4.25 The preparation room may serve as the focal point for the ENT clinic to receive trays of instruments and packs from a sterile services department (SSD). These items may be held here until required for use. The preparation room will be used to prepare trolleys and equipment for use in a treatment room or consulting/examination room. It should therefore be adjacent to the treatment rooms it supports, and easily accessible to the consulting/examination rooms.

4.26 Cleaned and disinfected endoscopes may be brought to, and stored within, a cupboard constructed specifically for the safe and secure storage of delicate and expensive equipment.

4.27 A controlled drugs cupboard may be located in the preparation room. It should be visible to staff at the staff base where possible. The alarm should be monitored at the staff base and at a continuously manned location external to the ENT clinic.

Cleansing/disinfecting room

4.28 Instruments and items of equipment which need to be reprocessed should be returned to a sterile services department (SSD). Flexible endoscopes and accessories are delicate, easily damaged and costly to repair. Therefore, it is appropriate that such items are reprocessed in a cleansing/disinfecting room, within the ENT clinic.

4.29 An awareness of the need for thorough cleansing and disinfecting of all endoscopes is recognised as an essential feature in preventing cross infection. While rigid endoscopes may routinely be cleansed and disinfected with ease, flexible endoscopes are more prone to damage and, because of the materials used in their construction, they cannot be subjected to a 134°C steam sterilization process. A number of suitable automated disinfecting systems are available. Following a rigorous manual clean, an endoscope can be attached to an automated system for a controlled, cold chemical disinfection cycle.

4.30 Glutaraldehyde is currently the cold chemical disinfectant most commonly used. It is a hazardous substance, being toxic, irritant and allergenic, and extreme care must be taken to avoid inhalation and skin and eye contact. More detailed guidance on its use and on safety precautions are included in paragraph 6.8.

4.31 Storage is required for appropriate personal protective clothing such as nitrile gloves, goggles, impermeable aprons and respiratory protection suitable for use when mixing and dispensing solutions of glutaraldehyde.

4.32 Used instruments for return to a sterile services department can be held temporarily in the cleansing/disinfecting room whilst awaiting collection.

4.33 Alternatively, and dependent on the policy agreed with the sterile services department for reprocessing basic instruments, there may be a need to provide facilities for such items to be washed manually and sterilized using a bench-top sterilizer. If a bench-top sterilizer is provided, it should not be sited adjacent to the automated disinfecting system used for endoscopes, because the local convection currents generated by the sterilizer may adversely affect the toxic vapour extract performance of the auto-disinfector.

4.34 Suction bottles will also be emptied and cleansed in the cleansing/disinfecting room.

4.35 The cleansing/disinfecting room should be close to all treatment rooms.

Recovery room

4.36 Following an investigative or treatment procedure, patients may require a short period of time to recover quietly. Easy chairs are required for patients and their companions.

Staff base

4.37 A small staff base is required to act as a focal point for the treatment area and to oversee patients awaiting treatment, patients under medication and those resting in the recovery room. Administrative tasks will also be carried out here.

Sub-waiting area

4.38 A sub-waiting area is required where patients who have received medication will wait prior to further treatment. Patients will be overseen by staff at the staff base.

Clean and dirty utilities

4.39 The clean and dirty utilities provided in the main OPD, or in an adjacent clinic, may also serve the needs of an ENT clinic. If the distances are too great to be effective, then suitably-sized dedicated clean and dirty utilities to meet the needs of the ENT treatment area may be required.

Nursing/administration office

4.40 An office is required within the ENT clinic for routine office work, staff interviewing and discussions.

Interview room

4.41 In view of the number of hard of hearing patients attending the ENT clinic, a room where patients and relatives can be interviewed and/or counselled in privacy should be provided in a quiet location. Natural light and ventilation are desirable. Semi-easy chairs and a coffee table are required.

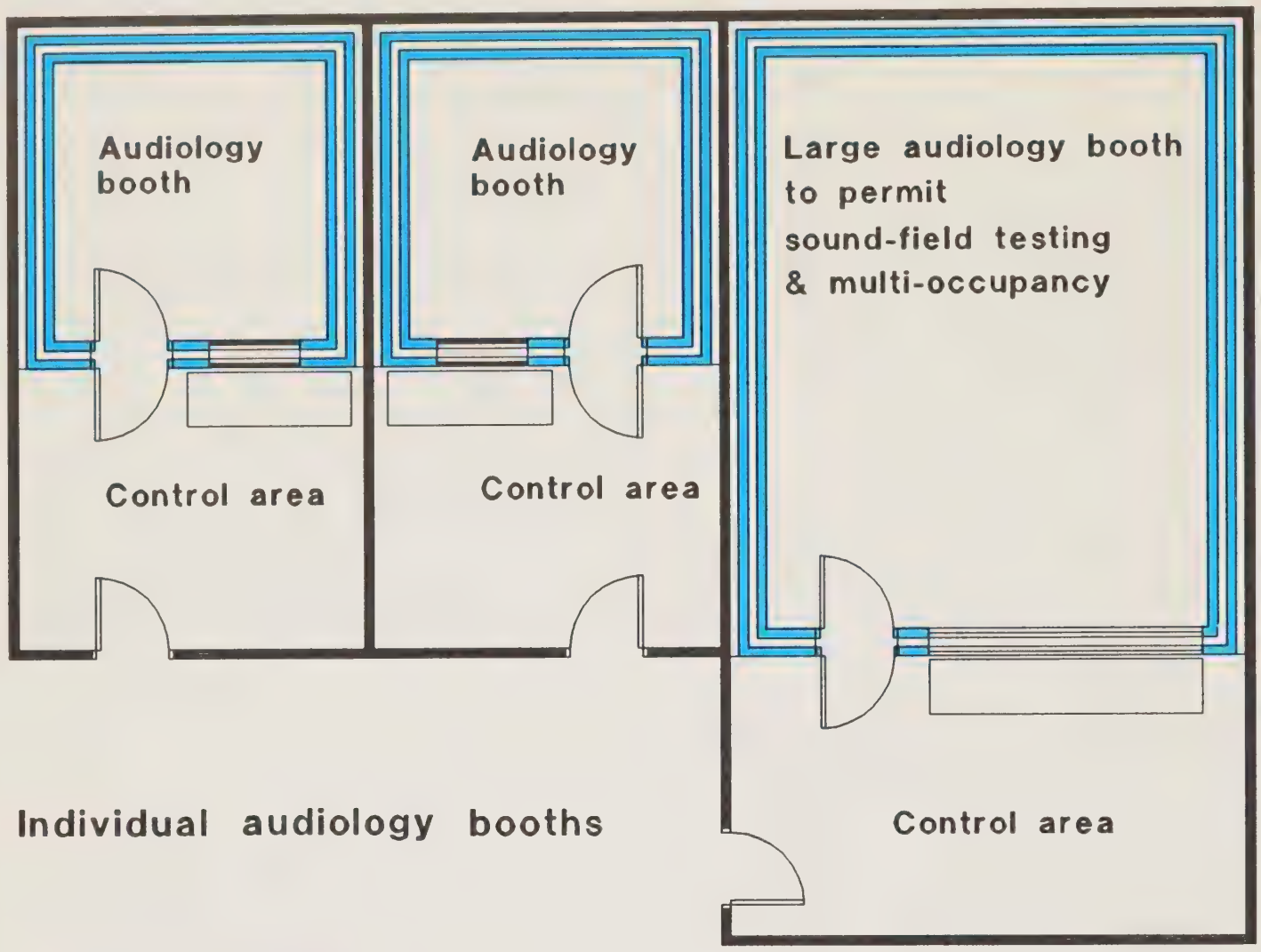
4.42 This room may also be used for a mother to breast feed in privacy.

Clinic store

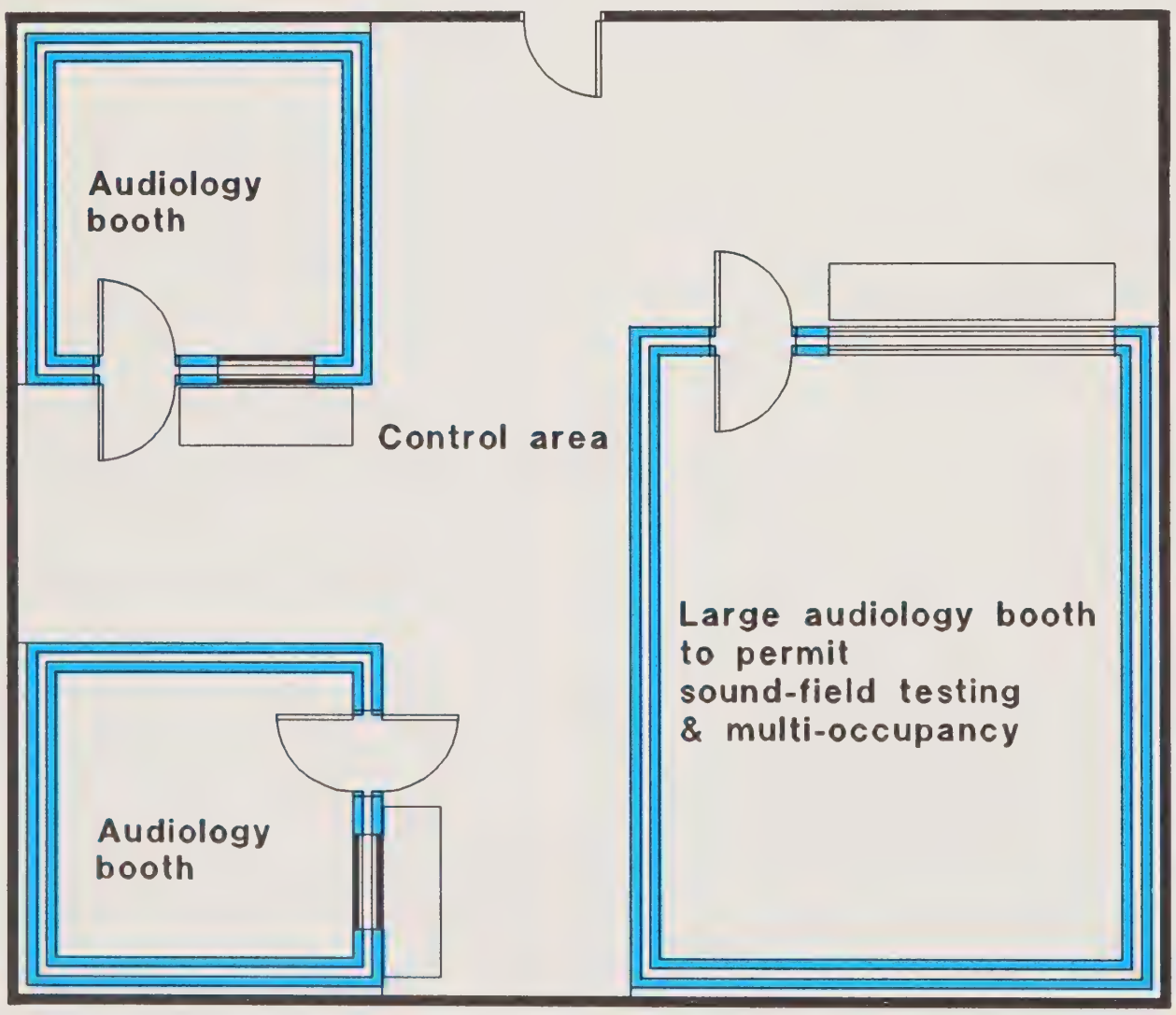
4.43 Storage for small supply items and equipment is required.

Consultants/junior staff/secretarial offices

4.44 The planning and design of office accommodation is described in HBN 18 – 'Office accommodation in health buildings'.[7] These offices may be located within the ENT clinic or alternatively centralised with other consultants' offices, elsewhere within the Acute General Hospital.



Individual audiology booths



Audiometric testing area with shared control area

Figure 3 Audiometric testing area: design options

Audiology clinic

4.45 Patients attending the audiology clinic may do so as a result of having a clinic appointment, or they may be referred to the audiology clinic by the ENT consultant, immediately following consultation and examination.

4.46 On completion of the audiological examination and test, a patient may return to be seen by the ENT consultant.

Audiometric testing area

4.47 Soundproof accommodation, providing a controlled acoustic environment, is required where patients may be examined audiometrically. This Supplement refers to these soundproof spaces as booths. Such accommodation may comprise a single booth in one room, or a number of booths in one or more rooms (see Figure 3). It is expected that each booth and its associated control area will be located to limit the extent of extraneous noise which may compromise the test conditions. At the same time, there is a need to ensure an acceptable working environment for staff. Natural lighting through windows and boosts to the mechanical ventilation may assist in dissipating oppressive atmospheres when the booth is in continuous use.

4.48 The examinations and tests likely to be undertaken within an audiology booth include:

- pure tone threshold audiometry, air and bone;
- sound-field testing;
- impedance tests/tympanometry;
- speech audiometry, using earphones.

4.49 One of the booths must be large enough to permit sound-field testing and multi-occupancy, for example, to accommodate a child and parent. Dependent on the examinations and tests being conducted, space may also be required for audiology staff and others, for example, a psychologist.

4.50 Project teams need to determine the number and sizes of booths required in response to the clinic's projected workload.

Audiology booth

4.51 The level of noise reduction required can be achieved by the use of commercially available booths or by locally constructed soundproofing measures. Due to the difficulty in achieving acceptable noise reduction levels, increasing use is being made of specialist manufacturers who supply and install purpose-built booths complete with internal finishes and decorations, electrical power, lighting, communications and mechanical ventilation and cooling.

4.52 The guidance given in this Supplement is based on commercially available, double-skin, standard audiology booths.

4.53 The design and construction of commercially available booths is based on the expertise of specialists, such as clinical users, acoustic engineers and research. They are designed so that they "float" within a structure and thereby eliminate structure-borne sound. Commercially available booths comprise walls which may be single or double-skin, and roof and floor which are all independent of the surrounding construction. Floors "float" on properly loaded vibration isolators. Double-skin walls are recommended to achieve sound insulation which virtually eliminates all external structure and airborne sound.

4.54 Any windows, observation panels and doors fitted to an audiology booth must not compromise the level of sound insulation provided by the booth.

4.55 Where audiology booths are installed into an existing building, the floor of the booth will be 150–200 mm above the normal floor level. A ramp, either permanent or temporary, should be provided at a slope not exceeding 8.5% to facilitate access for wheelchair users. Space will need to be allocated to allow for this. Where an audiology booth(s) is planned as part of a new building, consideration should be given to floating the booth so that its internal floor is level with the clinic floor.

4.56 The doors of audiology booths, whether double (to provide an acoustic break) or single, are heavy and can be a hazard. In particular, when a door opens outwards, there is a need to protect personnel and the surrounding walls/structure, fixtures and fittings from the unexpected swing of the door.

4.57 An intercom system between an audiology booth and its associated control area is required, designed and installed in a manner that preserves the acoustic integrity of the audiology booth.

4.58 Expert advice in respect of audiology booths should be sought early in the planning process.

Control area

4.59 A desk-height worktop, with sufficient space and socket-outlets to accommodate audiometric testing equipment and controls, is required immediately outside each audiology booth. The control worktop must not touch the audiology booth. An audiologist may work at the worktop, communicating with the patient and initiating and recording the examinations and tests being undertaken.

4.60 An audiology booth used for adults and older children requires a 2-way observation panel between the audiology booth and the control area to enable staff to take note of all activities occurring within the booth, and for the reassurance of patients.

4.61 In booths where sound-field testing is undertaken, a one-way observation panel, from control area to booth, is required. During sound-field testing, an audiologist must be able to view the actions of a child at any point within the booth.

4.62 When more than one booth is located within the same room, the control area of each booth is shared, providing a less claustrophobic working environment. While the control area needs to be sound insulated, this need not be to the same level as the audiology booth (see paragraph 3.19).

Vestibular function test room

4.63 The examination and tests undertaken in a vestibular function test room (also known as a labyrinth test room) will include electro-nystagmography (ENG) including caloric, smooth pursuit, optokinetic, positional and others.

4.64 The vestibular function test room does not require soundproofing. It should be large enough to have a patient area, and an area to hold the equipment required for the test procedures and for recording the data obtained.

4.65 Total darkness is required, and as the test and recording equipment will be difficult to operate in total darkness, the patient-monitoring equipment should be screened from the patient area. Screening should eliminate any light associated with the equipment. The screening should also protect the patient's area from being light-compromised should the room door be opened, even inadvertently, during a procedure.

4.66 A couch, with an adjustable head section, is needed to position the patient's head at the angles required.

4.67 The use of air caloric testing or water caloric testing are two options for the project team to consider in consultation with the clinical and technical specialists. The more recently introduced air induced nystagmus evoked by irrigating both ears, using warm and cold air, requires a specific piece of equipment. Air stimulation avoids the dangers associated with irrigating a perforated membrane with water and there are no water tanks to fill and clean. The air pump is built-in. Water caloric induced nystagmus, evoked by irrigating both ears with warm and cold water, also requires a specific piece of equipment (see Appendix 4). More recently designed equipment provides water containers which are easy to remove and are resistant to spillage.

4.68 A worktop should be provided within the vestibular function test room for the test and data recording equipment held permanently within the room. Storage drawers for electrodes etc., will also be required. The room should have a remote control light switch. Windows and carpeting are not required.

Screened room

4.69 Traditional equipment necessary for the examination and testing for evoked potential investigations requires screening from external radio frequency interference. This has been achieved by building a radio frequency (RF) shield into the fabric to create a screened room. However, recent technical advances have enabled equipment to be produced which is less sensitive to RF interference and can also be mobile, eliminating the need for a dedicated room.

Audiology equipment store

4.70 Audiology equipment requiring major repair, maintenance and servicing may be returned to the manufacturer or sent to an audiology equipment workshop. Project teams should decide on the preferred location of an audiology equipment workshop, which may be part of an electronic and medical engineering (EME) workshop, or incorporated directly into an audiology clinic. The accommodation and services required for an audiology equipment workshop are described in Health Building Note (HBN) 34 'Estate maintenance and works operations'.[8]

4.71 A small store with shelves is required for the storage of portable equipment used for audiometric testing in the Community and for holding equipment prior to dispatch for servicing or repair. The equipment being stored is expensive and the store should therefore be lockable and dedicated for use by the audiology clinic.

Principal audiologist's office

4.72 An office is required for the principal audiologist where administrative tasks can be undertaken.

Staff office/rest room

4.73 An office is required for the audiology staff where administrative tasks can be carried out. The office may additionally include an informal area with beverage facilities, easy chairs and a coffee table.

Hearing aid centre

4.74 The issue, fitting and evaluation of hearing aids for babies and young children will be undertaken in the audiology clinic rather than within a hearing aid centre.

Reception

4.75 Patients attend a hearing aid centre primarily on a "drop-in" basis, without appointment and they require a discrete reception point. Project teams should bear in mind that all patients attending the hearing aid centre will be hard of hearing.

4.76 Administrative tasks associated with the hearing aid centre will usually be carried out at reception.

4.77 As the centre operates on a "drop-in" basis, patients' hearing aid case notes should be readily accessible to reception staff.

4.78 Reception should be well lit and quiet.

Waiting area

4.79 If conveniently close, patients attending the hearing aid centre may use the waiting area as described in paragraphs 4.7 to 4.11; otherwise, a small dedicated waiting area will be required.

Interview and fitting room

4.80 In an interview and fitting room, audiologists and hearing therapists will:

a. interview and counsel patients;
b. undertake real ear analysis tests;
c. take impressions for an ear mould;
d. issue and fit a hearing aid appliance.

An audiology training amplifier should be provided.

4.81 Secure storage for a stock of hearing aid appliances, batteries and disposable items should be provided.

4.82 An interview and fitting room should provide a well lit, quiet environment. Windows, providing natural lighting beneficial for the interviewing and counselling activities, should be capable of being darkened. The room does not need to be soundproof.

4.83 When a hearing aid centre is combined with an audiology clinic, the interview and fitting room should be easily accessible from the main waiting area.

Environmental devices demonstration room

4.84 Bell boards, flashing lights and other environmental devices may be demonstrated, to deaf or hard of hearing persons, to help the selection of devices which compensate for individual hearing disabilities, particularly for day-to-day situations.

4.85 Manufacturers of various devices are usually prepared to demonstrate to organised groups and will bring their own equipment for this purpose. A supply of electric socket outlets and a TV aerial socket, positioned above an open bench top which extends along one wall of the room, are required to facilitate the differing demonstrations.

4.86 The room should be naturally lit and ventilated, and have seating for those attending a demonstration. Supplementary lighting may be necessary during a demonstration.

Hearing aid repair workshop

4.87 A workshop is required for undertaking minor repairs to hearing aid appliances. An appliance requiring a major repair is likely to be returned to the manufacturer.

Ear mould workshop

4.88 The manufacture of ear moulds may be carried out in a hearing aid centre or produced commercially. In the latter case the ear mould workshop will not be required.

4.89 Where a workshop is provided as part of a hearing aid centre, the dust produced by drilling, grinding and buffing tools should be removed by the use of an exhaust hood.

Speech therapy

Consulting/examination/treatment room

4.90 A room is required sufficient in size to accommodate a therapist and patient (who may be in a wheelchair) plus a companion and/or assistant speech therapist. The room should be naturally lit and provide a relaxing atmosphere. It must be mechanically ventilated and acoustically treated, making it suitable for recording and sound-sensitive equipment. There should be storage for files, clinical materials and small assessment items. A full length mirror, either fixed or free-standing, is also required.

4.91 Speech audiometry is not expected to be undertaken in this room, as the special needs for this type of procedure will be available in an audiology clinic.

Speech therapy office

4.92 This Supplement assumes that office accommodation for the chief speech therapist will be provided in rehabilitation. The satellite speech therapy consulting/examination/treatment room should, however, be supported with basic office accommodation.

5.0 Environmental and other topics

Introduction

5.1 Chapter 5 of HBN 12 – 'Out-patients department'[1] contains guidance concerning aspects of function and design which are common to health buildings generally and which will need to be borne in mind when designing new buildings or up-grading existing premises. The guidance is relevant to the accommodation described in this Supplement.

6.0 Engineering services

Introduction

6.1 Some spaces in the ENT and audiology clinics and hearing aid centre of an Acute General Hospital's out-patients department (OPD) are described in HBN 12 – 'Out-patients department'.[1] Chapter 6 of HBN 12 should therefore be consulted for the engineering design criteria, materials specifications and reference data which are generally applicable to the accommodation described in this Supplement.

6.2 Certain spaces, see paragraph 3.12, are specific to ENT and audiology clinics and hearing aid centres. The engineering implications and services requirements associated with these spaces, which are additional to those in Chapter 6 of HBN 12,[1] are described in the following paragraphs.

MECHANICAL SERVICES

Heating

6.3 The general heating requirements for the ENT and audiology clinics and hearing aid centre will be similar to those for the OPD. The accommodation will not normally be in use at night and during weekends (see paragraph 3.11). Notional space temperatures are shown in Appendix 2.

Ventilation

6.4 An audiology booth is designed to control noise transmission and will need mechanical ventilation and cooling. The noise level in this space should comply with the noise spectrum given in Appendix 3. The design should ensure that extraneous conversation is not overheard via the supply and extract ducts. Particular care is therefore required in the selection, design, siting and installation of fan motors, fan silencers, dampers, supply and exhaust air ducts and grilles. Where the multi-occupancy booth is used solely for children, the noise level criteria may be relaxed by up to 10 dB against the test tone frequency range.

6.5 The speech therapy consulting/examination/ treatment room should also be mechanically ventilated and may need to be mechanically cooled.

6.6 Notional air changes per hour are shown in Appendix 2.

6.7 Cooling plant should be designed to maintain an internal temperature of 25°C when the external ambient is 28°C.

6.8 Disinfection of endoscopes with a solution of glutaraldehyde should be carried out in a cabinet which has a separate mechanical ventilation extract system to ensure compliance with the Occupational Exposure Standard (OES) set by the Health and Safety Executive in their annual guidance note, EH40.[9] The OES, currently 0.2ppm for glutaraldehyde, forms part of the requirements of the Control of Substances Hazardous to Health (COSHH) Regulations 1988.[10] The room containing the cabinet should also be mechanically ventilated. Further guidance is contained in 'Control of Glutaraldehyde in Health Care Premises by Local Exhaust Ventilation'.[11]

Hot, cold and drinking water services

6.9 Hot and cold water pipe runs and drainage runs should be planned so as to minimise the risk of transmission of noise to the audiometric testing area and speech therapy consulting/examination/treatment room.

Caloric testing

6.10 Where water caloric testing is the preferred option (see paragraph 4.67 and Appendix 4), a cold water supply and drainage is required. Where, however, portable air caloric testing equipment is preferred, a power supply only is needed.

Piped medical gases and vacuum

6.11 Piped medical vacuum may be required in each ENT treatment room. Further guidance is contained in Health Technical Memorandum (HTM) 2022 'Piped medical gases, medical compressed air and medical vacuum installations'.[12]

ELECTRICAL SERVICES

Lighting

6.12 High frequency fluorescent luminaires, due to a number of advantages, may be the best choice for lighting throughout the clinics. Conventional fluorescent equipment is liable to generate noise and, if used in the audiology booths, it will be necessary to locate the inductive equipment elsewhere.

6.13 Dimming facilities will be required for the general lighting in the consulting/examination and treatment rooms in the ENT clinic.

6.14 Where sound-field testing is carried out in the multi-occupancy audiology booth, the lighting should be well diffused, shadowless and free from glare or contrasts. Two ceiling-mounted spotlights are required, one on either side of the chair, for use as light stimuli.

6.15 Small fixation lights should be fitted on the ceiling above the couch in the caloric test area in the vestibular function test room. Two other small ceiling-mounted lights for calibrating electro-nystagmography equipment will also be required. More detailed guidance on these and other matters is contained in the CIBSE Lighting Guide, LG2.[13]

6.16 Notional illuminance levels are shown in Appendix 2.

Power supplies

6.17 Socket outlets and switches in the multi-occupancy audiology booth should be at a height such that they cannot be reached by toddlers.

6.18 Notional socket outlet requirements are shown in Appendix 2.

Telephones

6.19 Telephones should normally be of the desk pattern. The telephones in the audiometric testing area should be of the type having lamp instead of a bell signal.

6.20 An acoustic hood with a payphone for the use of patients should be sited in or adjacent to the main waiting spaces unless a hospital payphone is nearby. This telephone should be of the adjustable boost receiver type and should be connected directly to the public exchange and not via the hospital exchange. It should be mounted at a height suitable for use by wheelchair patients. Further guidance is contained within HBN 48 – 'Telephone services'.[14]

Clocks

6.21 Clocks should have silent movements and, in treatment areas, a sweep second-hand.

Communication circuits

6.22 Communication circuits are required between the audiology booths and their associated control area.

6.23 The microphones for the multi-occupancy audiology booth where sound-field testing is carried out, are usually suspended from the ceiling.

6.24 The circuits should enable recorded sounds to be reproduced from loudspeakers in the multi-occupancy audiology booth and simultaneously, as required, in the associated control area. A microphone in the control area should be connected to the loudspeakers in the multi-occupancy audiology booth.

6.25 Microphones should be provided in the other audiology booths so that patients can communicate by loudspeaker with the audiology staff in the associated control area.

6.26 Conduits between each audiology booth and its associated control area should be sealed to control the transmission of noise.

7.0 Cost information

Introduction

7.1 For all types of health building, it is important that building costs and revenue expenditure are kept as low as possible, consistent with acceptable standards. Within this general context, Health Building Notes provide a synopsis of accommodation for health buildings which the Department of Health, in conjunction with the National Health Service, recommends for the provision of a given service.

Works cost

7.2 To prepare an estimate of the works cost for a scheme, reference should be made to the Capricode Health Building Procedures Manual (Chapter 1, Stage 1, Annex 1(c)).[15] The total cost allowance for a scheme is derived by aggregating the cost of the functional units, Essential Complementary Accommodation (ECA) and Optional Accommodation and Services (OAS), as appropriate to the particular scheme.

7.3 The cost allowances cover the building and engineering requirements set out in this Supplement. In costing the functional units, it has been assumed that the ENT and audiology clinics and hearing aid centre will usually form part of the general out-patients department within an Acute General Hospital, where the common use of services will be available.

Functional unit

7.4 The functional units for this Supplement are the consulting/examination room for the ENT clinic, the audiology booth for the audiology clinic and the interview and fitting room for the hearing aid centre. Two sizes of each clinic have been costed – three and six consulting/examination rooms for the ENT clinic, and one and three audiology booths for the audiology clinic. One size of hearing aid centre has been costed.

7.5 For costing purposes, the size of the double-skin audiology booth included within the cost allowances has approximate internal dimensions of 2700 mm × 2500 mm × 1900 mm. The multi-occupancy audiology booth has minimum internal plan dimensions of 6300 mm × 4800 mm to permit sound-field testing. The activity spaces and areas used for costing the functional units are listed in the schedules of accommodation at the end of this chapter.

Essential Complementary Accommodation

7.6 ECA comprises activity spaces which are essential to the running of the ENT and audiology clinics and a hearing aid centre but which, in certain circumstances, may be available in a convenient location elsewhere. This Supplement assumes that the following essential accommodation can be shared:

a. staff wc/wash;

b. cleaners' room;

c. wheelchair hold;

d. clean utility;

e. dirty utility;

f. consultant's office;

g. junior staff office;

h. secretarial office.

The areas are listed in the Schedules of Accommodation at the end of this chapter.

Optional Accommodation and Services

7.7 This Supplement, where appropriate, draws attention to project options for providing services or facilities, including the likely cost implications. This information will enable project teams to select the solution which is most suitable to their needs. The OAS costed in this Supplement are as follows:

a. satellite speech therapy;

b. ear mould workshop.

The areas are listed in the Schedules of Accommodation at the end of this chapter.

Dimensions and areas

7.8 In determining spatial requirements, the essential factor is not the total area provided but the critical dimensions, that is, those dimensions critical to the efficient functioning of the activities which are to be carried out. To assist project teams in preparing detailed design solutions for the rooms and spaces, studies have been carried out to establish dimensional requirements in the form of critical dimensions. The results of these studies appear as ergonomic diagrams in HBN 40 – 'Common activity spaces'.[16]

7.9 For development planning and at the earliest stage of a design, it may be convenient for designers to have data available which will enable them to make an approximate assessment of the sizes involved. For this reason, the areas prepared for the purpose of establishing the cost allowances are included at the end of this chapter.

7.10 It is emphasised that the areas published **do not** represent recommended sizes, nor are they to be regarded in any way as specific individual entitlements.

Circulation

7.11 Space for circulation, which includes allowance for planning provision, an engineering zone adjacent to the external walls, small vertical ducts and partitions, is shown in the schedules of accommodation and is included in the cost allowances.

Communications

7.12 Staircases, lifts and plantrooms, with the exception of an electrical switchcupboard, are not included in the cost allowances.

Engineering services

7.13 The following engineering services, as described in Chapter 6 and exemplified in the activity data, are included in the cost allowances. Primary engineering services are assumed to be conveniently available at the boundary of the department.

a. mechanical services:
   - (i) heating – low pressure hot water system with thermostatic radiator control, maximum touch temperature 43°C;
   - (ii) ventilation – mechanical supply and extract to meet clinical and functional requirements and including cooling to audiology booths; plant included. Other areas will be mainly naturally ventilated;
   - (iii) cold water service – supplied from potable central storage tanks to service points, and including fire hose reels; storage tanks excluded;
   - (iv) hot water service – centrally supplied to service points; storage excluded;
   - (v) medical gases – piped medical gases are not required but piped medical vacuum should be provided in the ENT treatment rooms;

b. electrical services:
   - (i) distribution board;
   - (ii) lighting system – general lighting as required by tasks. Includes high-frequency fluorescent fittings, tungsten, safety and emergency luminaires, and dimming as appropriate;
   - (iii) power system – socket-outlets, outlets for equipment, supplies for ventilation plant and equipotential earth-bonding;
   - (iv) alarm system – fire, security, and Controlled Drugs cupboard;
   - (v) staff location – extension from the hospital system. Staff/staff and patient/staff call system;
   - (vi) communication – telephone internal cabling distribution and outlets, but excluding handsets. Data transmission conduits, including conduits between audiology booths and their associated control area, conduits for next patient call system and other clinical areas as appropriate, but excluding equipment;

c. equipment (Group 1):
   - (i) X-ray viewers;
   - (ii) Controlled Drugs cupboard;
   - (iii) alarm and ventilation plant indicator panels.

Schedules of accommodation

Para no	ENT clinic Activity spaces	Space area sq m	Number of consulting examination rooms Three Qty	Total area sq m	Six Qty	Total area sq m
	Entrance and reception					
4.03	Reception desk	6.00	1	6.00	1	6.00
4.07	Waiting area		1	20.00	1	30.00
4.12	Children's play space	10.00	1	10.00	1	10.00
4.14	WC/wash/nappy change	3.00	2	6.00	3	9.00
4.14	Disabled wc/wash	4.50	1	4.50	1	4.50
	Patient areas					
4.18	Consulting/examination room	15.00	3	45.00	6	90.00
4.21	Treatment room	13.00	2	26.00	3	39.00
4.25	Preparation room	7.00	1	7.00	1	7.00
4.36	Recovery room		1	8.00	1	10.00
4.37	Staff base	6.00	1	6.00	1	6.00
4.38	Sub-wait		1	5.00	1	7.00
	Utility/support spaces					
4.40	Nursing/administration office	9.00	1	9.00	1	9.00
–	Beverage bay	3.00	1	3.00	1	3.00
4.28	Cleansing/disinfecting room	5.00	1	5.00	1	5.00
–	Switch cupboard	2.00	1	2.00	1	2.00
4.41	Interview room	8.00	1	8.00	1	8.00
	Storage/supplies					
4.43	Clinic store		1	5.50	1	6.00
	Net total			176.00		251.50
	Circulation etc			69.80		99.70
	Total			245.80		351.20
	Departmental areas			245 sq m		350 sq m

Para no	Audiology clinic Activity spaces	Space area sq m	1 booth Qty	 Total area sq m	3 booths Qty	 Total area sq m
	Entrance and reception					
4.03	Reception	5.50	1	5.50	1	5.50
4.07	Main waiting		1	10.00	1	15.00
4.12	Children's play space	10.00	1	10.00	1	10.00
4.14	WC/wash	3.00	1	3.00	1	3.00
4.14	Disabled wc/wash	4.50	1	4.50	1	4.50
	Patient areas					
4.47	Audiometric testing area		1	45.00	1	77.00
4.63	Vestibular function test room	15.00	1	15.00	1	15.00
	Utility/support spaces					
4.72	Principal audiologist's office	9.00	1	9.00	1	9.00
4.73	Staff office/rest room		1	15.00	1	30.00
–	Switch cupboard	2.00	1	2.00	1	2.00
	Storage/supplies					
4.70	Equipment store	8.50	1	8.50	1	8.50
	Net total			127.50		179.50
	Circulation etc			43.90		61.70
	Total			171.40		241.20
	Departmental areas			170 sq m		240 sq m

Para no	Hearing aid centre Activity spaces	1 interview and fitting room Space area sq m	 Qty	 Total area sq m
	Entrance and reception			
4.75	Reception		1	7.50
4.79	Waiting area		1	12.00
4.80	Interview and fitting room	10.00	1	10.00
4.84	Environmental devices demonstration room	15.50	1	15.50
4.87	Hearing aid repair workshop	8.00	1	8.00
4.14	WC/disabled/wash/nappy change	4.50	1	4.50
	Net total			57.50
	Circulation etc.			19.80
	Total			77.30
	Departmental areas			75 sq m

Essential Complementary Accommodation

Para no	Activity space	Space area sq m	Circn etc sq m	Total area sq m
–	Staff WC/wash	2.50	1.00	3.00
4.16	Cleaners' room	4.50	2.00	6.00
4.15	Wheelchair hold	1.65	1.00	2.00
4.39	Clean utility	7.00	3.00	10.00
4.39	Dirty utility	7.00	3.00	10.00
4.44	Consultant's office	10.00	4.00	14.00
4.44	Junior staff office	15.00	6.00	21.00
4.44	Secretarial office	15.00	6.00	21.00

Optional Accommodation and Services

Para no	Activity space	Space area sq m	Circn etc sq m	Total area sq m
4.88	Ear mould workshop	12.00	5.00	17.00
	Speech therapy			
4.90	Consulting/examination room	15.50	6.00	21.50
4.92	Speech therapy office	9.00	4.00	13.00

8.0 Activity data

Introduction

8.1 The term "activity data" refers to an information system developed to help project and design teams by defining the users' needs more precisely. It comprises three types of information sheet: activity space data sheets (known as A-Sheets), their supporting activity data sheet (known as B-Sheets), and A-Sheet component listings (known as D-Sheets).

8.2 A-Sheets record in more detail than is described in this Supplement each task or activity that is performed in a particular activity space (which may be a room, space or bay) together with details of the environmental conditions and the technical data necessary to enable the activities to be performed. Each A-Sheet also contains a list of the titles and code numbers of the relevant B-Sheets.

8.3 B-Sheets provide narrative text and graphics to scale relating to one activity. They show equipment fitted or supplied as part of the building, and the necessary engineering terminals. There are also "component B-Sheets" which show a range of particular components rather than an activity.

8.4 D-Sheets provide information about the total quantities of components (excluding those in Group 4 – see HBN 12[(1)]) extracted from all B-Sheets selected for inclusion in an individual A-Sheet.

8.5 Further information about the use and preparation of activity data and an explanatory demonstration disk can be obtained from NHS Estates, 1 Trevelyan Square, Boar Lane, Leeds LS1 6AE.

Activity data applicable to this Supplement

8.6 The A-Sheets recommended for the activity spaces described in this Supplement are either new sheets, amended ones, or selected from existing sheets. A list of A-Sheet code numbers and titles for the specific spaces described in this Supplement is given at the end of this chapter. Reference should be made to HBN 12[(1)] for A-Sheet code numbers and titles for other necessary spaces, not described individually in this Supplement.

8.7 Further activity data sheets may be selected, or drawn up by project teams to their own requirements, for any services not covered by this Supplement.

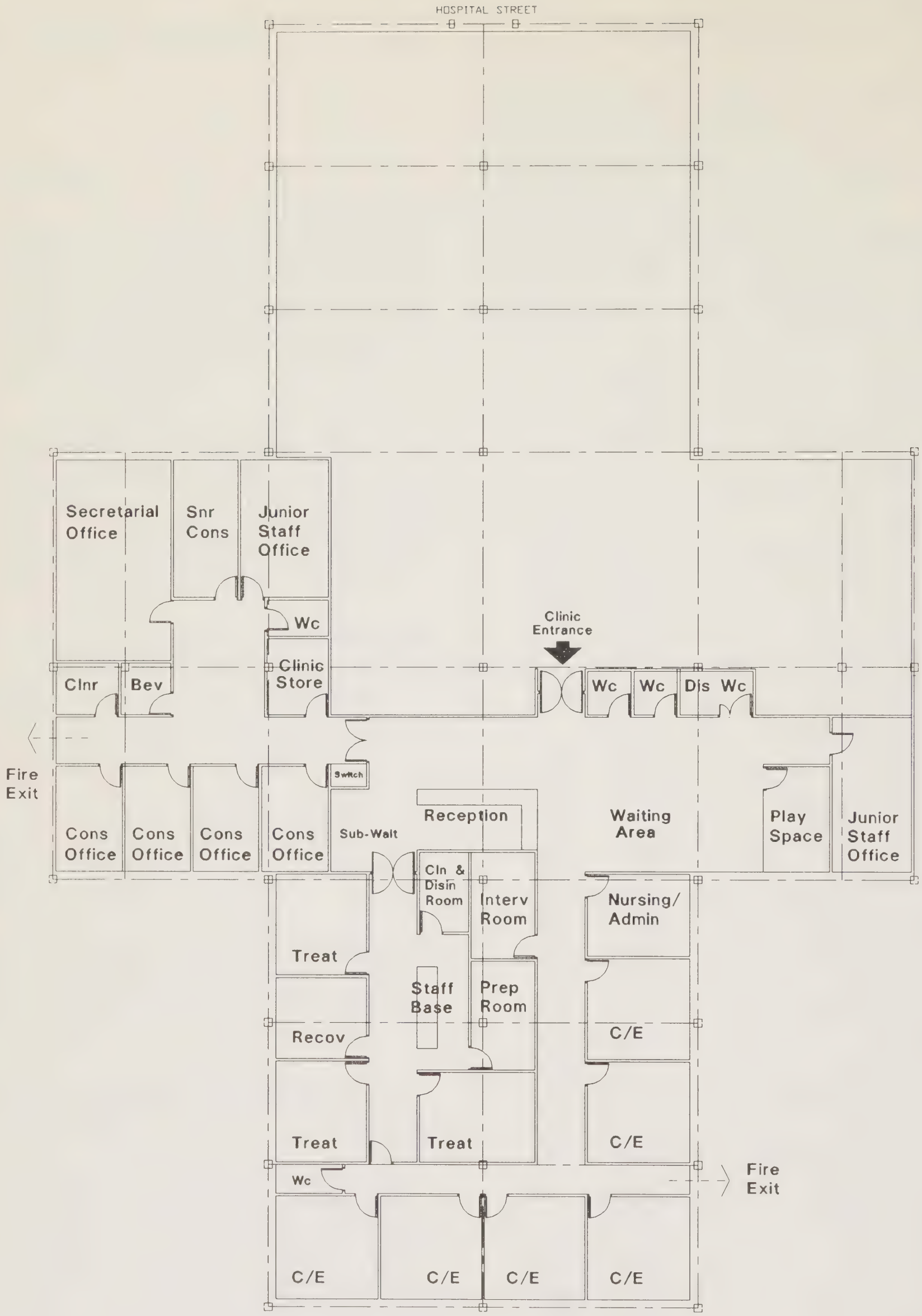
8.8 However, in order to ensure consistent and economic provision, variations from the A-Sheets recommended for the spaces included in this Supplement should only be considered where it has been decided that the function of a space will substantially differ from that described. For advice on specialist services associated with Activity DataBase, contact NHS Estates.

List of activity data A-Sheets

8.9 Note: The activity data A-Sheets listed may not carry a title identical to the activity space detailed in this Supplement. Use of the appropriate A-Sheet code number will, however, result in the correct activity space being accessed.

Activity space	A-Sheet code no	Para no in HBN 12 Supp 3
ENT clinic		
Reception	J0806	4.3
Waiting area	J1216	4.7
Children's play space	J1401	4.12
WC/wash/nappy change	V1108	4.14
Disabled WC/wash	V1112	4.14
Consulting/examination room	C0216	4.18
Treatment room	X0122	4.21
Preparation room	X0109	4.25
Cleansing/disinfecting room	Y0423	4.28
Recovery room	B2506	4.36
Staff Base	T0110	4.37
Sub-waiting area	J1206	4.38
Nursing/administration office	M0201	4.40
Interview room	M0712	4.41
Clinic store	W1532	4.43
Audiology clinic		
Reception	J0806	4.3
Waiting area	J1120	4.7
Children's play space	J1401	4.12
WC/wash/nappy change	V1108	4.14
Disabled WC/wash	V1112	4.14
Audiometric testing area	C0514	4.47
Vestibular function test room	C0513	4.63
Audiology equipment store	W1531	4.70
Principal audiologist's office	M0602	4.72
Staff office/staff room	M0603	4.73
Hearing aid centre		
Reception	J0806	4.75
Waiting area	J1120	4.79
Interview and fitting room	C1106	4.80
Environmental devices demonstration room	H0806	4.84
Hearing aid repair workshop	L1806	4.87
Essential Complementary Accommodation		
Wheelchair hold	W1576	4.15
Cleaner's room	Y1501	4.16
Clean utility	T0501	4.39
Dirty utility	Y0409	4.39
Consultant's office	M0304	4.44
Junior staff office	M0116	4.44
Secretarial office	M1312	4.44
Optional Accommodation and Services		
Ear mould workshop	L1805	4.88
Speech therapy – consulting/ examination/treatment room	C0216	4.90
Speech therapy office	M0201	4.92

Appendix 1



ENT Clinic:
notional plan with six consulting/examination rooms

Appendix 2

Design data

The following notional air changes and design data is provided for preliminary planning. The actual figures should be determined by a detailed examination of the functional requirements and planning relationships of the spaces.

Activity space	Temp (°C)	Air changes/ hour	Illuminance (Lux)	Twin socket-outlets
ENT consulting/examination room	18	NV	300	3
Treatment room	18	NV	100	2
Preparation room	18	6	300	2
Cleansing and disinfecting room	18	EV	300	2
Recovery room	18	NV	100	1
Audiology booth	18	6	150	5
Control area	18	6	150	3
Vestibular function test room	18	6	100	4
Interview and fitting room	18	NV	100	2
Hearing aid repair workshop	18	NV	300	2
Ear mould workshop	18	EV	300	2
Speech therapy consulting/examination/treatment room	18	6	100	3

Key

EV – Extract ventilation
NV – Natural ventilation

Appendix 3

Maximum permissible ambient sound pressure levels

Mid-frequency of ⅓ octave band Hz	Maximum permissible ambient sound pressure levels L_{max}(reference: 20 μPa) dB Test tone frequency range	
	125 Hz to 8000 Hz	250 Hz to 8000 Hz
31.5	55	63
40	47	56
50	41	49
63	35	44
80	30	39
100	25	35
125	20	28
160	17	21
200	15	15
250	13	13
315	11	11
400	9	9
500	8	8
630	8	8
800	7	7
1000	7	7
1250	7	7
1600	8	8
2000	8	8
2500	6	6
3150	4	4
4000	2	2
5000	4	4
6300	9	9
8000	15	15

Note: This table should be used in conjunction with ISO 8253 Part 1: 1989 'Audiometric test methods. Basic pure tone air and bone conduction threshold audiometry'. [17]

Appendix 4

Water caloric test recording equipment

1. An elapsed-time indicator with a 120 mm diameter dial graduated 0 to 2 minutes with 2 seconds per division is required. This should be mounted on the wall at the head end of the couch and it may have a luminous dial or be otherwise dimly illuminated, with the light controlled by a separate switch. The commencement, stopping and re-setting of the timer will be effected by foot switches provided on either side of the head end of the couch and connected in parallel, so that for each observation the first operation of the switch will start the timer, the second will stop it and the third will re-set it to zero ready for the next series of observations. A very quiet bell or buzzer should be connected to the timer and arranged to give a single warning:

   a. after the elapse of 30/40 seconds (end of irrigation);

   b. after the elapse of 60 seconds (onset of maximum response);

   c. after the elapse of every 10 seconds thereafter (for comparison of frequency of response) until the timer is stopped.

2. The timer equipment must also incorporate a switch that will close the starting circuit of the chart motor on the electro-nystagmograph (ENG) after a period of 35 seconds has elapsed and stop it simultaneously with the stopping of the timer. Standard equipment developed for this purpose is contained in two separate wall-mounted boxes, with an inter-connecting cable.

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